

We claim:

1. A method of making an interior rearview mirror assembly comprising:
providing interior rearview mirror components, the components comprising a plate frame, a cover, a mount and a pivot ball;
providing a mirror;
assembling the interior rearview mirror components and the mirror to form the interior rearview mirror assembly;
wherein providing the interior rearview mirror components includes thixo-forming at least one of the components from a material comprising a magnesium alloy.
2. The method of making an interior rearview mirror assembly of claim 1, wherein:
the at least one of the components includes a wall having a thickness of less than about 0.75mm.
3. The method of making an interior rearview mirror assembly of claim 2, wherein:
the at least one of the components including the wall comprises the cover.
4. The method of making an interior rearview mirror assembly of claim 2, wherein:
the at least one of the components including the wall comprises the mount.
5. The method of making an interior rearview mirror assembly of claim 1, wherein:
the at least one of the components comprises the plate frame.
6. The method of making an interior rearview mirror assembly of claim 1, wherein:
the at least one of the components comprises the pivot ball.
7. The method of making an interior rearview mirror assembly of claim 1, wherein:
the at least one of the components comprises the cover.
8. The method of making an interior rearview mirror assembly of claim 1, wherein:

the cover comprises a shell without structural support ribs.

9. The method of making an interior rearview mirror assembly of claim 1, wherein:
providing the interior rearview mirror components includes providing an integral pivot ball and plate frame.
10. The method of making an interior rearview mirror assembly of claim 9, wherein:
the at least one of the components comprises the integral pivot ball and plate frame.
11. The method of making an interior rearview mirror assembly of claim 1, wherein:
providing the interior rearview mirror components includes providing an integral pivot ball, stem and plate frame.
12. The method of making an interior rearview mirror assembly of claim 11, wherein:
the at least one of the components comprises the integral pivot ball, stem and plate frame.
13. The method of making an interior rearview mirror assembly of claim 1, wherein:
the interior rearview mirror components further include a bezel.
14. The method of making an interior rearview mirror assembly of claim 13, wherein:
the at least one of the components includes the bezel.
15. The method of making an interior rearview mirror assembly of claim 1, wherein:
the pivot ball and the mount are integral.
16. The method of making an interior rearview mirror assembly of claim 15, wherein:
the at least one of the components comprises the integral pivot ball and mount.

17. The method of making an interior rearview mirror assembly of claim 1, further including:

providing a circuit board; and
placing the mirror and the circuit board in the cover.

18. The method of making an interior rearview mirror assembly of claim 1, further including:

spacing the pivot ball and the plate frame.

19. The method of making an interior rearview mirror assembly of claim 1, further including:

providing a mount ball integral with the mount; and
connecting the pivot ball to the plate frame, inserting the pivot ball into a first end of the sleeve and inserting the mount ball into a second end of the sleeve.

20. The method of making an interior rearview mirror assembly of claim 19, further including:

forming the mount ball from a material comprising a magnesium alloy.

21. An interior rearview mirror assembly made from the method of claim 1.

22. The interior rearview mirror assembly of claim 21, wherein:

at least one of the components includes a wall having a thickness of less than about 0.75mm.

23. The interior rearview mirror assembly of claim 22, wherein:

the at least one of the components including the wall comprises the cover.

24. The interior rearview mirror assembly of claim 22, wherein:

the at least one of the components including the wall comprises the mount.

25. The interior rearview mirror assembly of claim 21, wherein:
the at least one of the components comprises the plate frame.
26. The interior rearview mirror assembly of claim 21, wherein:
the at least one of the components comprises the pivot ball.
27. The interior rearview mirror assembly of claim 21, wherein:
the at least one of the components comprises the cover.
28. The interior rearview mirror assembly of claim 21, wherein:
the cover comprises a shell without structural support ribs.
29. The interior rearview mirror assembly of claim 21, wherein:
the pivot ball and the plate frame are integral.
30. The interior rearview mirror assembly of claim 29, wherein:
the at least one of the components comprises the integral pivot ball and plate frame.
31. The interior rearview mirror assembly of claim 21, wherein:
the pivot ball and the plate frame are integral with a stem.
32. The interior rearview mirror assembly of claim 31, wherein:
the at least one of the components comprises the integral pivot ball, stem and plate
frame.
33. The interior rearview mirror assembly of claim 21, wherein:
the interior rearview mirror components further include a bezel.
34. The interior rearview mirror assembly of claim 33, wherein:

- the at least one of the components includes the bezel.
35. The interior rearview mirror assembly of claim 21, wherein:
the pivot ball and the mount are integral.
 36. The interior rearview mirror assembly of claim 35, wherein:
the at least one of the components comprises the integral pivot ball and mount.
 37. The interior rearview mirror assembly of claim 21, further including:
providing a circuit board; and
placing the mirror and the circuit board in the cover.
 38. The interior rearview mirror assembly of claim 21, further including:
spacing the pivot ball and the plate frame.
 39. The interior rearview mirror assembly of claim 21, further including:
providing a mount ball integral with the mount; and
connecting the pivot ball to the plate frame, inserting the pivot ball into a first end of the sleeve and inserting the mount ball into a second end of the sleeve.
 40. The interior rearview mirror assembly of claim 39, further including:
forming the mount ball from a material comprising a magnesium alloy.
 41. A method of making an interior rearview mirror assembly comprising:
providing interior rearview mirror components, the components comprising a plate frame and a cover;
providing a mirror; and
assembling the interior rearview mirror components and the mirror to form the interior rearview mirror assembly;

wherein providing the interior rearview mirror components includes forming at least one of the components from a material comprising a magnesium alloy.

42. The method of making an interior rearview mirror assembly of claim 41, wherein:
the at least one of the components is the plate frame.
43. The method of making an interior rearview mirror assembly of claim 41, further including:
a pivot ball interconnected to the plate frame.
44. The method of making an interior rearview mirror assembly of claim 43, wherein:
the pivot ball is formed from a material comprising a magnesium alloy.
45. The method of making an interior rearview mirror assembly of claim 41, wherein:
the at least one of the components is the cover.
46. The method of making an interior rearview mirror assembly of claim 41, wherein:
the cover comprises a shell without structural support ribs.
47. The method of making an interior rearview mirror assembly of claim 41, wherein:
providing the interior rearview mirror components includes providing an integral pivot ball and plate frame.
48. The method of making an interior rearview mirror assembly of claim 47, wherein:
the at least one of the components is the integral pivot ball and plate frame.
49. The method of making an interior rearview mirror assembly of claim 41, wherein:
providing the interior rearview mirror components includes providing an integral pivot ball, stem and plate frame.

50. The method of making an interior rearview mirror assembly of claim 49, wherein:
the at least one of the components is the integral pivot ball, stem and plate frame.
51. The method of making an interior rearview mirror assembly of claim 41, wherein:
forming at least one of the components from a material comprising a magnesium alloy
comprises thixo-molding the at least one of the components.
52. The method of making an interior rearview mirror assembly of claim 41, wherein:
the interior rearview mirror components further include a bezel.
53. The method of making an interior rearview mirror assembly of claim 42, wherein:
the at least one of the components is the bezel.
54. The method of making an interior rearview mirror assembly of claim 41, further
including:
providing an integral pivot ball and mount; and
interconnecting the integral pivot ball and mount to the cover.
55. The method of making an interior rearview mirror assembly of claim 44, wherein:
the integral pivot ball and mount is formed from a material comprising a magnesium
alloy.
56. The method of making an interior rearview mirror assembly of claim 41, further
including:
providing a circuit board; and
placing the mirror and the circuit board in the cover.
57. The method of making an interior rearview mirror assembly of claim 41, further
including:
providing a pivot ball; and

spacing the pivot ball and the plate frame.

58. The method of making an interior rearview mirror assembly of claim 41, further including:

providing a first pivot ball, a sleeve and a second pivot ball integral with a mount; and
connecting the pivot ball to the plate frame, inserting the pivot ball into a first end of the sleeve and inserting the second pivot ball into a second end of the sleeve.

59. The method of making an interior rearview mirror assembly of claim 58, wherein:
the second pivot ball and the mount are integral.

60. The method of making an interior rearview mirror assembly of claim 58, further including:

providing a pivot ball; and
forming the pivot ball from a material comprising a magnesium alloy.

61. The method of making an interior rearview mirror assembly of claim 41, wherein:
the at least one of the components includes a wall having a thickness of less than about 0.75mm.

62. The method of making an interior rearview mirror assembly of claim 61, wherein:
the at least one of the components including the wall comprises the cover.

63. The method of making an interior rearview mirror assembly of claim 61, wherein:
the at least one of the components including the wall comprises the mount.

64. An interior rearview mirror assembly comprising:
a plate frame made of a material comprising a magnesium alloy;
an electrochromic mirror adjacent a front of the plate frame;
a circuit board adjacent a rear of the base frame;

a pivot ball connected to the plate frame for pivoting the electrochromic mirror;
a mount connected to the pivot ball and configured to be connected to a windshield of a vehicle.

65. The interior rearview mirror assembly of claim 64, wherein:
the plate frame and the pivot ball are integrally formed and made from the material comprising a magnesium alloy.
66. The interior rearview mirror assembly of claim 64, wherein:
the pivot ball includes a passageway therethrough.
67. The interior rearview mirror assembly of claim 64, wherein:
the mount and the pivot ball are integrally formed.
68. The interior rearview mirror assembly of claim 67, wherein:
the mount and the pivot ball are formed from the material comprising a magnesium alloy.
69. The interior rearview mirror assembly of claim 64, further including:
a cover surrounding a portion of the plate frame and the electrochromic mirror.
70. The interior rearview mirror assembly of claim 69, wherein:
the cover is made from a material comprising a magnesium alloy.
71. The interior rearview mirror assembly of claim 70, wherein:
the cover comprises a shell without structural support ribs.
72. The interior rearview mirror assembly of claim 69, further including:
a bezel connected to the cover.

73. The interior rearview mirror assembly of claim 72, wherein:
the bezel is made from a material comprising a magnesium alloy.
74. An interior rearview mirror assembly comprising:
a plate frame;
a stem extending from the plate frame; and
a pivot ball located on an end of the stem opposite the plate frame;
wherein the plate frame, the stem and the pivot ball are integrally formed from a material comprising a magnesium alloy.
75. The interior rearview mirror assembly of claim 74, wherein:
the stem and the pivot ball include a passageway therethrough.
76. The interior rearview mirror assembly of claim 75, wherein:
the stem includes a lateral opening connected to the passageway.
77. The interior rearview mirror assembly of claim 74, wherein:
the stem includes a channel for laying wires therein.
78. An interior rearview mirror assembly comprising:
a plate frame;
an electrochromic mirror adjacent a front of the plate frame;
a circuit board adjacent a rear of the base frame;
a cover surrounding the plate frame and the electrochromic mirror;
wherein at least one of the plate frame and the cover is formed from a material comprising a magnesium alloy.
79. The interior rearview mirror assembly of claim 78, further including:
a pivot ball connected to the plate frame for pivoting the electrochromic mirror; and

a mount connected to the pivot ball and configured to be connected to a windshield of a vehicle.

80. The interior rearview mirror assembly of claim 78, wherein:
the plate frame is formed from the material comprising a magnesium alloy.
81. The interior rearview mirror assembly of claim 78, wherein:
the cover is formed from the material comprising a magnesium alloy.
82. The interior rearview mirror assembly of claim 81, wherein:
the cover comprises a shell without structural support ribs.
83. The interior rearview mirror assembly of claim 78, further including:
a mount interconnected to the plate frame.
84. The interior rearview mirror assembly of claim 78, wherein:
the pivot ball and the plate frame are integrally formed.
85. The interior rearview mirror assembly of claim 84, wherein:
the integral pivot ball and plate frame is formed from a material comprising a magnesium alloy.
86. The interior rearview mirror assembly of claim 78, wherein:
the pivot ball, the plate frame and a stem are integrally formed.
87. The interior rearview mirror assembly of claim 86, wherein:
the integral pivot ball, stem and plate frame are formed from the material comprising a magnesium alloy.
88. The interior rearview mirror assembly of claim 78, further including:

a bezel connected to the cover.

89. The interior rearview mirror assembly of claim 88, wherein:
the bezel is formed from the material comprising a magnesium alloy.
90. The interior rearview mirror assembly of claim 78, further including:
an integral mount and pivot ball.
91. The interior rearview mirror assembly of claim 90, wherein:
the integral mount and pivot ball are formed from a material comprising a magnesium alloy.
92. The interior rearview mirror assembly of claim 78, further including:
a pivot ball spaced from the plate frame.
93. The interior rearview mirror assembly of claim 78, further including:
a first pivot ball interconnected to the plate frame and a second pivot ball;
a sleeve having a first end and a second end;
wherein the first pivot ball is inserted into the first end of the sleeve and the second ball is inserted into the second end of the sleeve.
94. The interior rearview mirror assembly of claim 93, wherein:
the second pivot ball and mount are integral and formed from a material comprising a magnesium alloy.
95. The interior rearview mirror assembly of claim 93, wherein:
the first pivot ball is formed from a material comprising a magnesium alloy.
96. An interior rearview mirror assembly comprising:
a plate frame;

an electrochromic mirror adjacent a front of the plate frame;
a circuit board adjacent a rear of the base frame;
a pivot ball connected to the plate frame for pivoting the electrochromic mirror; and
a mount connected to the pivot ball and configured to be connected to a windshield of a vehicle;

wherein at least one of the plate frame, the pivot ball and the mount are made of a material comprising a magnesium alloy.